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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/735,373	12/12/2003	Fernando Garcia-Osuna	26.0263 US	1833
30686	7590	10/12/2005		
SCHLUMBERGER K.K. 2-2-1 FUCHINOBE SAGAMIHARA-SHI, KANAOAWA-KEN, JAPAN			EXAMINER LOBO, IAN J	
229-0006			ART UNIT 3662	PAPER NUMBER

DATE MAILED: 10/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/735,373

Applicant(s)

GARCIA-OSUNA ET AL.

Examiner

Ian J. Lobo

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 04 August 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 and 8-11 is/are rejected.
- 7) ☒ Claim(s) 2-7 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>6/6/05</u> . | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Smith ('666) or Marks (464) or Vanderschuel ('204) when taken in view of Medlin ('137) or Tello et al ('160).

Per claim 1, see Vanderschuel, col. 1, lines 39-49 and col. 55, lines 43+, see Fig. 1 of Smith and see Marks, col. 1, lines 61-64, col. 2, lines 20-56. In all the patents, *in-situ* calibration of the acoustic receivers is suggested, as noted by the above referenced sections.

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The difference between claim 1 and the above noted prior art is the claim specifies that the acoustic tool has at least one monopole source.

Medlin teaches that it is well known in the art to utilize monopole sources to determine stress data and thereby predict the direction of a hydraulically induced fracture in an underground formation traversed by a borehole. Tello et al teaches that monopole sources are advantageously utilized for determining radial cementing conditions in a borehole.

In view of Medlin or Tello et al, it would have been obvious to one of ordinary skill in the art to modify any one of Marks, Vanderschuel or Smith by substituting at least one monopole source in the acoustic tools of Smith, Vanderschuel or Marks so as to ascertain a tool that is able to predict the direction of a hydraulically induced fracture or the radial cement condition. Claim 1 is so rejected.

3. Claims 8, 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Marks ('464) in view of Tello et al ('160), as applied to claim 1 above, and further in view of Vanderschel ('204)

Per claim 8, Marks system includes an acoustic tool (10) comprising a plurality of receivers (14, 16), an acoustic chamber (20) receptive of the acoustic tool (10), a plurality of spacers (36), a computer (68).

The difference between claim 8 and Marks system is Marks does not disclose that the computer includes a set of instructions for calibrating the acoustic receivers.

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Vanderschel teaches (col. 55, lines 43+) that it is known that logging tools that are connected to computers have instructions in the computers for calibrating the acoustic receivers. Thus, it would be obvious to one of ordinary skill in the art that the computer of Marks includes software for calibrating the acoustic receivers. Claim 8 is so rejected.

Per claim 10, it would appear that the claimed 300 psi of the acoustic chamber is an obvious design variation of Marks.

Per claim 11, see Tello et al, Fig. 1.

4. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Marks in view of Tello et al ('160) and Vandershel as applied to claim 8 above, and further in view of Sinha et al ('835).

Claim 9 differs from the above noted Marks patent by claiming that the acoustic tool has multiple receiver stations spaced axially and each receiver station has a plurality of azimuthally arranged receivers.

Sinha et al teaches a sonde or logging tool where receiver stations are spaced axially and each station has a plurality of azimuthally arranged receivers so as to detect the plurality of waves (i.e, stoneley, shear, compressional, etc) propagating in a borehole formation. It would have been obvious to one of ordinary skill in the art to modify Marks to include the plural receivers arranged in an azimuthal configuration and spaced radially apart so as to detect the full spectrum of borehole and formation wave energy.

***Allowable Subject Matter***

5. Claims 2-7 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Response to Arguments***

6. Applicant's arguments filed August 4, 2005 have been fully considered but they are not persuasive.

Applicant first argues that the prior art references cited do not suggest *in situ* calibrating of the acoustic receivers mounted to the tool. This argument is not convincing since any one of Marks, Vandershel or Smith do suggest such calibration as evidenced by the above cited passages (see para. 2, above)

Applicant's arguments with respect to the newly inserted limitation " at least one monopole source" have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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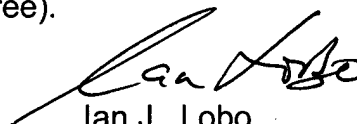
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ian J. Lobo whose telephone number is (571) 272-6974. The examiner can normally be reached on Monday - Friday, 6:30 - 3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas H. Tarcza can be reached on (571) 272-6979. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read "Ian J. Lobo", is positioned above the printed name.

Ian J. Lobo  
Primary Examiner  
Art Unit 3662

ijl